one to five volts; this requirement is not applicable to a TV interface device that uses a built-in signal source and has no provisions for the connection of an external signal source. For devices that contain provisions for an external signal source but do not contain provisions for the input of an external baseband signal, e.g., some cable system terminal devices, compliance with the provisions of this paragraph shall be demonstrated with a radio frequency input signal of 0 to 25 dBmV.

(e) For cable system terminal devices and TV interface devices used with a master antenna, as defined in paragraph (b)(3) of this section, the holder of the grant of authorization shall specify in the instruction manual or pamphlet, if a manual is not provided, the types of wires or coaxial cables necessary to ensure that the unit complies with the requirements of this part. The holder of the grant of authorization must comply with the provisions of §15.27. For all other TV interface devices, the wires or coaxial cables used to couple the output signals to the TV receiver shall be provided by the responsible party.

(f) A TV interface device which is submitted to the Commission as a composite device in a single enclosure containing a RF modulator, video source and other component devices shall be submitted on a single application (FCC Form 731) and shall be authorized as a single device.

(g) An external device or accessory that is intended to be attached to a TV interface device shall comply with the technical and administrative requirements set out in the rules under which it operates. For example, a personal computer must be certificated to show compliance with the regulations for digital devices.

(h) Stand-alone switches used to alternate between cable service and an antenna shall provide isolation between the antenna and cable input terminals that is at least 80 dB from 54 MHz to 216 MHz, at least 60 dB from 216 MHz to 550 MHz and at least 55 dB from 550 MHz to 806 MHz.The 80 dB standard applies at 216 MHz and the 60 dB standard applies at 550 MHz. In the case of stand-alone switches requiring a power source, the required isolation shall be maintained in the event the device is not connected to a power source or power is interrupted. The provisions of this paragraph are applicable as of June 30, 1997.

(i) Switches and other devices intended to be used to by-pass the processing circuitry of a cable system terminal device, whether internal to such a terminal device or a stand-alone unit, shall not attenuate the input signal more than 6 dB from 54 MHz to 550 MHz, or more than 8 dB from 550 MHz to 804 MHz. The 6 dB standard applies at 550 MHz. The provisions of this paragraph are applicable June 30, 1997.

[54 FR 17714, Apr. 25, 1989, as amended at 57 FR 33448, July 29, 1992; 59 FR 25341, May 16, 1994; 61 FR 18509, Apr. 26, 1996]

§15.117 TV broadcast receivers.

(a) All TV broadcast receivers shipped in interstate commerce or imported into the United States, for sale or resale to the public, shall comply with the provisions of this section, except that paragraphs (f) and (g) of this section shall not apply to the features of such sets that provide for reception of digital television signals. The reference in this section to TV broadcast receivers also includes devices, such as TV interface devices and set-top devices that are intended to provide audio-video signals to a video monitor, that incorporate the tuner portion of a TV broadcast receiver and that are equipped with an antenna or antenna terminals that can be used for off-the-air reception of TV broadcast signals, as authorized under part 73 of this chapter.

(b) TV broadcast receivers shall be capable of adequately receiving all channels allocated by the Commission to the television broadcast service.

(c) On a given receiver, use of the UHF and VHF tuning systems shall provide approximately the same degree of tuning accuracy with approximately the same expenditure of time and effort: *Provided, however,* That this requirement will be considered to be met if the need for routine fine tuning is eliminated on UHF channels.

(1) *Basic tuning mechanism.* If a TV broadcast receiver is equipped to provide for repeated access to VHF television channels at discrete tuning positions, that receiver shall be equipped to provide for repeated access to a minimum of six UHF television channels at discrete tuning positions. Unless a discrete tuning position is provided for each channel allocated to UHF television, each position shall be readily adjustable to a particular UHF channel by the user without the use of tools. If 12 or fewer discrete tuning positions are provided, each position shall be adjustable to receive any channel allocated to UHF television.

NOTE: The combination of detented rotary switch and pushbutton controls is acceptable, provided UHF channels, after their initial selection, can be accurately tuned with an expenditure of time and effort approximately the same as that used in accurately tuning VHF channels. A UHF tuning system comprising five pushbuttons and a separate manual tuning knob is considered to provide repeated access to six channels at discrete tuning positions. A one-knob (VHF/UHF) tuning system providing repeated access to 11 or more discrete tuning positions is also acceptable, provided each of the tuning positions is readily adjustable, without the use of tools, to receive any UHF channel.

(2) *Tuning controls and channel readout.* UHF tuning controls and channel readout on a given receiver shall be comparable in size, location, accessibility and legibility to VHF controls and readout on that receiver.

NOTE: Differences between UHF and VHF channel readout that follow directly from the larger number of UHF television channels available are acceptable if it is clear that a good faith effort to comply with the provisions of this section has been made.

(d) If equipment and controls that tend to simplify, expedite or perfect the reception of television signals (e.g., AFC, visual aids, remote control, or signal seeking capability referred to generally as tuning aids) are incorporated into the VHF portion of a TV broadcast receiver, tuning aids of the same type and comparable capability and quality shall be provided for the UHF portion of that receiver.

(e) If a television receiver has an antenna affixed to the VHF antenna terminals, it must have an antenna designed for and capable of receiving all UHF television channels affixed to the UHF antenna terminals. If a VHF antenna is provided with but not affixed to a receiver, a UHF antenna shall be provided with the receiver.

(f) The picture sensitivity of a TV broadcast receiver averaged for all channels between 14 and 69 inclusive shall not be more than 8dB larger than the peak picture sensitivity of that receiver averaged for all channels between 2 and 13 inclusive.

(g) The noise figure for any television channel 14 to 69 inclusive shall not exceed 14 dB. A TV receiver model is considered to comply with this noise figure if the maximum noise figure for channels 14–69 inclusive of 97.5% of all receivers within that model does not exceed 14 dB.

(1) The responsible party shall measure the noise figure of a number of UHF channels of the test sample to give reasonable assurance that the UHF noise figure for each channel complies with the above limit.

(2) The responsible party shall insert in his files a statement explaining the basis on which it will rely to ensure that at least 97.5% of all production units of the test sample that are manufactured have a noise figure of no greater than 14 dB.

(3) [Reserved]

(4) In the case of a TV tuner built-in as part of a video tape recorder that uses a power splitter between the antenna terminals of the video tape recorder and the input terminals of the TV tuner or a TV broadcast receiver that uses a power splitter between the antenna terminals of two or more UHF tuners contained within that receiver, 4 dB may be subtracted from the noise figure measured at the antenna terminals of the video tape recorder or TV broadcast receiver for determining compliance of the UHF tuner(s) with the 14 dB noise figure limit.

(h) *Digital television reception capability.* TV broadcast receivers are required only to provide useable picture and sound commensurate with their video and audio capabilities when receiving digital television signals.

(i) *Digital television reception capability implementation schedule.* (1) Responsible parties, as defined in §2.909 of this chapter, are required to equip new TV

broadcast receivers that are shipped in interstate commerce or imported from any foreign country into the United States and for which they are responsible to comply with the provisions of this section in accordance with the following schedule:

—Receivers with screen sizes 36′ and above—50% of all of a responsible party's units must include DTV tuners effective July 1, 2004; 100% of such units must include DTV tuners effective July 1, 2005

—Receivers with screen sizes 25′ to 36′—50% of all of a responsible party's units must include DTV tuners effective July 1, 2005; 100% of such units must include DTV tuners effective July 1, 2006

—Receivers with screen sizes 13′ to 24′—100% of all such units must include DTV tuners effective July 1, 2007

—Other devices (videocassette recorders (VCRs), digital video disk and digital versatile disk (DVD) players/recorders, etc.) that receive television signals—100% of all such units must include DTV tuners effective July 1, 2007.

(2) For purposes of this implementation schedule, screen sizes are to be measured diagonally across the picture viewing area. The requirement for equipping new TV broadcast receivers with DTV reception capability does not apply to units with integrated tuners/displays that have screen sizes measuring less than 7.8 inches vertically, *i.e.,* the vertical measurement of a screen in the 4:3 aspect ratio that measures 13′ diagonally across the picture viewing area.

(3) Responsible parties may include combinations of DTV monitors and set-top DTV tuners in meeting the required percentages of units with a DTV tuner if such combinations are marketed together with a single price.

(j) For a TV broadcast receiver equipped with a cable input selector switch, the selector switch shall provide, in any of its set positions, isolation between the antenna and cable input terminals of at least 80 dB from 54 MHz to 216 MHz, at least 60 dB from 216 MHz to 550 MHz and at least 55 dB from 550 MHz to 806 MHz. The 80 dB standard applies at 216 MHz and the 60dB standard applies at 550 MHz. In the case of a selector switch requiring a power source, the required isolation shall be maintained in the event the device is not connected to a power source or power is interrupted. An actual switch that can alternate between reception of cable television service and an antenna is not required for a TV broadcast receiver, provided compliance with the isolation requirement specified in this paragraph can be demonstrated and the circuitry following the antenna input terminal(s) has sufficient band-width to allow the reception of all TV broadcast channels authorized under this chapter. The provisions of this paragraph regarding frequencies in the range 550 MHz to 806 MHz are applicable as of June 30, 1997.

[54 FR 17714, Apr. 25, 1993, as amended at 59 FR 25341, May 16, 1994; 61 FR 30532, June 17, 1996; 67 FR 63294, Oct. 11, 2002]

§ 15.118 Cable ready consumer electronics equipment.

(a) All consumer electronics TV receiving equipment marketed in the United States as cable ready or cable compatible shall comply with the provisions of this section. Consumer electronics TV receiving equipment that includes features intended for use with cable service but does not fully comply with the provisions of this section are subject to the labelling requirements of §15.19(d). Until such time as generally accepted testing standards are developed, paragraphs (c) and (d) of this section will apply only to the analog portion of covered consumer electronics TV receiving equipment

(b) Cable ready consumer electronics equipment shall be capable of receiving all NTSC or similar video channels on channels 1 through 125 of the channel allocation plan set forth in the Electronics Industries Association's ''Cable Television Channel Identification Plan, EIA IS–132, May 1994'' (EIA IS–132). This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 522(a) and 1 CFR part 51. Copies of EIA IS–132 may be obtained from: Global Engineering Documents, 3130 South Harbor Boulevard, Santa Anna, CA 92704. Copies of EIA IS–132 may be inspected during normal business hours at the following locations: Federal